

## **REMARKS**

### **I. Introduction**

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of July 29, 2009 is respectfully requested.

By this amendment, claims 3, 4, 27, 28, 29, and 30 have been amended. Claims 3-32 are now pending in the application. No new matter has been added by these amendments.

### **II. Prior Art Rejections**

Currently, claims 3-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamada et al. (US 6,858,277), a duplicate rejection of the same claims is made under 35 U.S.C. § 103(a) over Yamada et al. in view of Miyamoto et al. (US 2003/0186164), and a second duplicate rejection of the same claims is made under 35 U.S.C. § 103(a) over Kojima et al. (US 6,416,837) in view of Yamada et al.

Claims 3 and 4 are patentable over Yamada et al., Miyamoto et al., and Kojima et al., whether taken alone or in combination, for the following reasons. Claim 3 requires an information recording medium having a recording layer which comprises a Ge-Bi-Te-M-based material expressed with the function  $(\text{GeTe})_x[(\text{M}_2\text{Te}_3)_y(\text{Bi}_2\text{Te}_3)_{1-y}]_{100-x}$  (mol %), wherein M represents at least one element selected from Ga and In. Claim 4 requires an information recording medium having a recording layer which comprises a Ge-Sn-Bi-Te-M-based material expressed with the function  $[(\text{SnTe})_z(\text{GeTe})_{1-z}]_x[(\text{M}_2\text{Te}_3)_y(\text{Bi}_2\text{Te}_3)_{1-y}]_{100-x}$  (mol %), wherein M represents at least one element selected from Ga and In.

Each of the duplicative rejections of claims 3-32 relies on a portion of the Yamada et al. reference which discloses the use of Sn and/or Al in an information recording medium. (See the

last line of page 2, the tenth line of page 3, and the last line of page 3 of the Office Action.) However, Yamada et al. does not disclose a Ge-Bi-Te-M-based material including  $\text{Ga}_2\text{Te}_3$  or  $\text{In}_2\text{Te}_3$ . Because Yamada et al. does not disclose an information recording medium having a recording layer which comprises a Ge-Bi-Te-M-based material expressed with the function  $(\text{GeTe})_x[(\text{M}_2\text{Te}_3)_y(\text{Bi}_2\text{Te}_3)_{1-y}]_{100-x}$  (mol %), wherein M represents at least one element selected from Ga and In, Yamada et al. cannot meet the requirements of claim 3. Because Yamada et al. does not disclose an information recording medium having a recording layer which comprises a Ge-Sn-Bi-Te-M-based material expressed with the function  $[(\text{SnTe})_z(\text{GeTe})_{1-z}]_x[(\text{M}_2\text{Te}_3)_y(\text{Bi}_2\text{Te}_3)_{1-y}]_{100-x}$  (mol %), wherein M represents at least one element selected from Ga and In, Yamada et al. cannot meet the requirements of claim 4.

Further, in rejecting claims 3-32 over Yamada et al. in view of Miyamoto et al., the Office Action states that the Miyamoto et al. reference “shows that it is well-known to add elements such as Al, In, and Ga to reduce nucleation rates.” However, Miyamoto et al. discloses Ga or In as an elemental substance, but does not disclose In or Ga being present as a telluride. (See paragraphs 0055-0058.) In other words, Miyamoto et al. does not disclose a Ge-Bi-Te-M-based material including  $\text{Ga}_2\text{Te}_3$  or  $\text{In}_2\text{Te}_3$ . Because Miyamoto et al. does not disclose an information recording medium having a recording layer which comprises a Ge-Bi-Te-M-based material expressed with the function  $(\text{GeTe})_x[(\text{M}_2\text{Te}_3)_y(\text{Bi}_2\text{Te}_3)_{1-y}]_{100-x}$  (mol %), wherein M represents at least one element selected from Ga and In, Miyamoto et al. cannot meet the requirements of claim 3. Because Miyamoto et al. does not disclose an information recording medium having a recording layer which comprises a Ge-Sn-Bi-Te-M-based material expressed with the function  $[(\text{SnTe})_z(\text{GeTe})_{1-z}]_x[(\text{M}_2\text{Te}_3)_y(\text{Bi}_2\text{Te}_3)_{1-y}]_{100-x}$  (mol %), wherein M

represents at least one element selected from Ga and In, Miyamoto et al. cannot meet the requirements of claim 4.

Further, because none of the prior art references In or Ga being present as a telluride in a recording layer of a information recording medium, no combination of those references could yield such a combination.

As discussed in detail in the specification, the configuration of the present invention enables recording at a high linear velocity as well as recording over a wide range of linear velocities. Neither the configuration nor the advantages of the present invention are disclosed by the prior art of record. Further, it appears that there would have been no reason to modify any of the prior art of record to yield a configuration which would meet the requirements of claim 3 or claim 4. It is thus submitted that the invention of the present application, as defined in claims 3 and 4, is not anticipated nor rendered obvious by the prior art, and yields significant advantages over the prior art. Allowance is respectfully requested.

Claims 5-26 depend, directly or indirectly, from one of claims 3 and 4 and are thus allowable for at least the reasons set forth above in support of claims 3 and 4. Claims 27 and 29 recite a method for producing an information recording medium comprising forming a recording layer comprising the material as recited in claim 3, and are thus allowable for at least the reasons set forth above in support of claim 3; claims 28 and 30-32 depend from one of claims 27 and 28 and are thus allowable by virtue of their dependencies.

In view of the foregoing amendments and remarks, inasmuch as all of the outstanding issues have been addressed, Applicants respectfully submit that the present application is now in condition for allowance, and action to such effect is earnestly solicited. Should any issues

remain after consideration of the response, however, the Examiner is invited to telephone the undersigned at the Examiner's convenience.

Respectfully submitted,

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